

REMARKS

Applicants respectfully request that the above-identified application be reexamined.

The Office Action mailed on November 17, 2003 ("Office Action"), rejected all of the claims remaining in this application. All of these claims are rejected under 35 U.S.C. § 102(a) as being fully anticipated by an article by Mohan et al., titled "Adapting Multimedia Internet Content for Universal Access" (Mohan et al.).

This amendment makes minor clarifying changes to the language of the claims. For reasons hereinafter set forth, applicants respectfully submit that the rejection of Claims 29-31, 67-69, 101-103, and 105-119 in view of the teachings of the cited reference noted above is in error and should be withdrawn and that this application be allowed.

Prior to discussing the reasons why applicants believe the claims pending in this application are allowable, a brief discussion of the present invention and the cited and applied reference is presented. The following discussion of the present invention and the teachings of the applied reference are not provided to define the scope or interpretation of any of the claims of this invention. Instead, they are provided to help the United States Patent and Trademark Office better appreciate important claim distinctions discussed hereafter.

Summary of the Invention

The present invention addresses the growing need of information providers to provide content that is both interesting and understandable to diverse users from different parts of the world. The process of providing content that is both interesting and understandable to users from diverse locations is known as localization. For example, a Web page written in English that originated in the United States needs to go through a localization process before it is delivered to a user understanding only French or to a user understanding English but living in South Africa.

The essence of the invention is to provide a method, a computer-readable medium having computer-executable instructions, and a computer system for localizing contents for viewers with diverse language backgrounds and/or geographical locations. In particular, the method, the computer-readable medium having computer-executable instructions, and the computer system localize the localizable content and store the localized content for delivery to users.

In one exemplary embodiment of the invention, the localizable content of a localizable document is isolated from the underlying code by extracting string literals from the code and storing them as symbols. The localizable content is the content that can be localized for a particular user based on the language and/or the geographical location of the user. The localizable content is then exported to a localizer for translation to localized content in one or more alternate languages. The localized content is stored in a directory hierarchy. The localized

content is automatically converted to one or more encoded versions, which are character set supports such as DBCS, Unicode, and UTF-8. These encoded versions are stored in the directory hierarchy as well.

The present invention allows users with different language backgrounds and/or geographical locations to receive content that they are able to understand and find interesting. Further, the present invention uses server resources efficiently. The data storage infrastructure of the present invention allows a server to support multiple languages and to readily support the addition of new languages. Furthermore, the isolation of localizable content from the underlying code preserves the operability of the underlying code when the localizable content is in the localization process. In addition, the support of different encoded versions allows the localized content to be used on different types of Internet browsers. Lastly, the localized content resulting from the present invention can be delivered to different client devices, regardless of their physical capacities in processing and displaying the content.

Summary of the Cited Reference

Mohan et al. "Adapting Multimedia Internet Content for Universal Access"

Mohan et al. is concerned with Internet content delivery to client devices that have varying physical capacities in processing and displaying the content. The solution presented by Mohan et al. is a system that adapts a Web page to optimally match the capacities of the client device requesting the Web page. For example, a system using Mohan et al. teaches delivering a Web page to a handheld device, excluding certain video clips or images because of the limited content processing and display capacity of the handheld device. However, the system may deliver the Web page with high resolution and modality to a high-definition TV set.

The system in Mohan et al. has two major components. One is a transcode scheme that provides a multiresolution, multimodal representation hierarchy for a multimedia document. Here, the content items in a Web page are transcoded into multiple resolution and modality versions so that they can be rendered on client devices that have different capacities. For example, a video item on a Web page is transcoded into a set of images with different resolutions so that it can be rendered even on a device that is incapable of displaying video.

The second key component for the system in Mohan et al. is a customizer. From the versions of content items resulting from the first component, the customizer selects the appropriate resolution and modality versions of the content items according to the capacities of the client device. Thus, the system delivers the optimal content, tailored to what the client device is able to process and display. For example, if the client device has limited resources, some of the content items on the Web page may not be delivered at all.

The method steps outlined by Mohan et al. are (1) extracting metadata about each content item from a Web page--the metadata reveals resource requirements of each content item; (2) transcoding content items on a Web page into multiple resolution and modality versions; (3) selecting content tailored to the client device's capacities from the multiresolution, multimodal versions produced in step (2); and (4) sending the tailored content to the client device and storing the tailored content in the computer system's cache.

If the same client device sends a repeated request in the future, the content stored in the cache will be sent to the client device. However, if the client device experiences change in terms of resolution, bandwidth, CPU resource, or storage, the same request from the client device will result in a recustomization of the Web page. The content stored in the cache will not be used.

As noted above and discussed more fully below, Mohan et al. is concerned with the issue of content delivery to client devices that have varying capacities in content processing and display. It does not address content delivery to viewers who have different language backgrounds and/or geographical locations—the focus of the present invention. Further, because the content resulted from Mohan et al. is customized for a client device with particular content processing and display capacities, the customized content cannot be delivered to a variety of client devices repeatedly, a benefit obtainable by embodiments of the present invention.

The Claims Distinguished

The Office Action rejected Claims 29-31, 67-69, 101-103, and 105-119 as being anticipated by Mohan et al. The Office Action asserts that Mohan et al. discloses each and every element of applicants' claims. Applicants respectfully disagree. The independent claims have been amended to add clarifying language previously implicit in the claims. As described in more detail below, Mohan et al. fails to disclose or suggest certain elements of the independent and the dependent claims. Applicants respectfully request reconsideration and allowance of these claims.

A. Independent Claims 1, 67, and 101

The Office Action has failed to show, and applicants are unable to find, where the cited reference teaches or remotely suggests the subject matter of independent Claims 1, 67, and 101. As amended, these claims recite generating localized versions of Internet documents according to a viewer's language and/or geographical location. Claim 29 is a method claim, Claim 67 is a computer-readable medium claim, and Claim 101 is a computer system claim. More specifically, Claim 29 is directed to a method for generating localized versions of a localizable Internet document including a set of executable steps. Claim 67 is directed to a computer-

readable medium having computer-executable instructions for generating localized versions of a localizable Internet document including a set of executable steps. Claim 101 is directed to a computer system for generating a localized version of a localizable Internet document wherein the computer system is capable of running an application having a set of executable steps. Claims 29, 67, and 101 all recite:

extracting a localizable portion of the localizable Internet document, said localizable portion is localizable according to different languages and/or geographical locations;

storing localized versions of the localizable portion in a directory hierarchy;

translating each localized version to a plurality of encoded versions; and
storing the encoded versions in the directory hierarchy.

The Office Action alleges that Mohan et al. teaches a method, a computer-readable medium having computer-executable instructions, and a computer system for generating localized versions of a localizable Internet document. As was defined in the specification of the present invention and further clarified by the amendment of the claims, localizable content in the present invention means content that can be localized according to different languages and/or geographical locations. As pointed out above, Mohan et al., on the other hand, teaches a system that adapts a multimedia document to optimally match the content processing and display capacities of the client device requesting the multimedia document. Nowhere does Mohan et al. teach the localization of content according to a user's language background and/or geographical location.

Further, Mohan et al. does not teach extracting a localizable portion of a localizable Internet document where the localizable portion is localizable according to different languages and/or geographical locations, as recited in Claims 29, 67, and 101. Mohan et al. teaches extracting metadata about the content in a Web page. The metadata reveals the resource requirements of each content item and is used in guiding subsequent transcoding and customization process. (See page 105, right column, last paragraph; and page 106, right column, "C. Content Analysis" section.) The metadata is not a localizable portion of a localizable Internet document and nowhere does Mohan et al. teach localizing or customizing the extracted metadata. Applicants have been unable to locate any pertinent subject matter in the place in Mohan et al. at page 108, left-hand column, first paragraph, referenced in the Office Action. This paragraph of Mohan et al. teaches retrieving the corresponding customized content from the cache. It does not teach extracting a localizable portion of the localizable Internet document.

Furthermore, Mohan et al. does not teach or even remotely suggest storing localized versions of the localizable portion in a directory hierarchy. What Mohan et al. teaches is storing in its data structure hierarchy multiple resolution and modality versions of the multimedia document. These versions are not yet customized for a particular client device.

In addition, Mohan et al. does not teach translating each localized version to a plurality of encoded versions, e.g., different character support sets, such as DBCS, Unicode, and UTF-8 formats. What Mohan et al. does appear to teach is to transcode content items on a Web page into multiple resolution and modality versions and to store them in the data structure hierarchy. These multiresolution and multimodality versions are not customized versions of the Web page. Mohan et al. has yet to customize the Web page for a particular client device by selecting content items with the proper resolution and modality versions from the data structure hierarchy, according to the client device content processing and display capacity.

Lastly, Mohan et al. does not teach storing the encoded versions of the localized content in the directory hierarchy. Mohan et al. teaches storing the customized content in the cache of the computer system after delivering the customized content to the client device. The cached content may or may not be reused later. If there is any change in the content processing and display capacities of the client device, a repeated request for the same Web page will result in a recustomization of the Web page before it is delivered to the client device. The content stored in the cache is not used in this case.

In summary, there is simply no teaching or suggestion in Mohan et al. of the subject matter recited in Claims 29, 67, or 101. Thus, applicants submit that Claims 29, 67, and 101 are clearly allowable.

B. Dependent Claims

Since all of the other claims remaining in this application depend from Claims 29, 67, and 101, respectively, these claims are submitted to be allowable for at least the same reasons that Claims 29, 67, and 101 are allowable.

Further, many of the dependent claims are submitted to be allowable for additional reasons. For example, Claims 30, 68, and 102 that depend from Claims 29, 67, and 101, respectively, each recite extracting the localizable portion of the localizable Internet document comprising extracting string literals from the localizable document and storing them as symbols. As noted above, Mohan et al. teaches extracting metadata about the content in a Web page. The metadata reveals resource requirements of a content item and is used to guide the subsequent transcoding and customization processes. Nowhere does Mohan et al. teach extracting string literals from the multimedia document and storing them as symbols. Consequently, applicants

respectfully submit that Claims 30, 68, and 102 are allowable for reasons in addition to the reasons why Claims 29, 67, and 101 are allowable.

Claims 31, 69, and 103 are also submitted to be allowable for additional reasons. Claims 31, 69, and 103 depend from Claims 29, 67, and 101, respectively. Each of these claims recites that the encoded versions represent DBCS, Unicode, and UTF-8 versions of the corresponding localized version. As noted above, Mohan et al. teaches populating its data structure hierarchy with multiresolution, multimodal versions of the content items on a Web page. These content items have not yet been customized according to the content processing and display capacities of the client device requesting the Web page. Nor does Mohan et al. teach or even remotely suggest that the multiresolution, multimodal versions represent DBCS, Unicode, and UTF-8 versions of the content items. Consequently, applicants respectfully submit that Claims 31, 69, and 103 are allowable for reasons in addition to the reasons why Claims 29, 67, and 101 are allowable.

In view of the foregoing comments, applicants respectfully submit that all of the claims in this application are clearly allowable in view of the cited and applied reference. Consequently, early and favorable action allowing these claims and passing this application to issue is respectfully solicited.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS^{PLLC}

Joy Y. Xiang
Registration No. 55,747
Direct Dial No. 206.695.1607

2/17/04
Joy Y. Xiang
Registration No. 55,747
Direct Dial No. 206.695.1607

I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

Date: February 17, 2004

JYX:mfp/nfs